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Technical Bulletins: Physical Fitness in Public Safety: Administering Ability and Agility Tests Properly

Don Darden

Municipal Technical Advisory Service

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A University of Tennessee

Technical Bulletin

September 2000

Physical Fitness in Public Safety: Administering Ability and Agility Tests Properly

By Don Darden

MTAS Municipal Management Consultant



Physical fitness for public safety workers is increasingly becoming a concern for city governments. No doubt, police and firefighters have physically demanding jobs. At any moment, an officer or firefighter may encounter a stressful emergency that demands tremendous physical exertion. For example, in the City of Shelbyville, a highly respected police officer suffered

a fatal heart attack during a foot pursuit. Incidents like this are all too common and emphasize the need for all cities to protect the public safety as well as the lives of police and firefighters by promoting good physical fitness. This bulletin discusses the need for physical testing in police and fire services and provides a model of a successful physical ability and agility program in Tennessee.

The Benefits of Physical Fitness

Physical fitness is important for police officers and firefighters because they need sufficient strength, endurance, and aerobic capacity to perform their jobs. An exercise program to maintain physical fitness has other benefits as well, particularly as a means of reducing stress. The stress reducing benefits of exercise are both emotional and physical such as decreasing the risk of hypertension and coronary disease. Exercise helps

alleviate feelings of anxiety and frustration, and it promotes healthful sleep. Many studies have shown that the more physically fit officers are, the more self-assured and happy they feel. An on-going physical training program helps an officer sustain job enthusiasm and improve self-control and total performance.

The physical fitness of police officers and firefighters can also have economic consequences. While a city's primary concern should always be protecting public health and safety, that protection must be provided as economically as possible. Pre-employment health screening reduces new hire injuries by as much as one-third. It is estimated that current employee health screening also results in a one-third reduction in injuries. Reducing injuries means reducing lost time, medical expenses, and workers' compensation claims.



Laws Governing Fitness of Firefighters and Police



Currently, cities are not required by state or federal law to administer pre-employment medical examinations or physical ability tests for firefighters or police officers. Even the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard, which determines a firefighter's ability

to use a respirator, does not require a complete medical examination. Cities may apparently administer medical examinations or physical ability or agility tests as long as the tests do not have an adverse impact on a protected class [42 U.S.C., Section 2000 e-(h)]. A protected class would include those persons protected by the Federal Civil Rights Act by virtue of their race, color, religion, sex, or national origin, or by the Americans with Disabilities Act.

Tennessee Code Annotated 38-8-106 sets forth the basic qualifications for police officers. One requirement is that a person employed as a police officer pass a physical examination by a licensed physician. However, there is no explicit statutory requirement that police officers maintain their physical ability while serving as a police officer. It is, therefore, not uncommon in Tennessee cities for an officer to take a pre-employment physical and never take another physical examination for the remainder of his/her career.

Why Implement a Fitness Policy?

Ray Crouch, MTAS fire consultant, says that one of the biggest problems in fire service today is that too often firefighters are allowed to remain on the job even when they are medically and physically unable to perform the essential functions of the job. The same can be said for police officers who may be physically unable to perform the essential job functions.

It should be a matter of public policy that every police and fire department take appropriate measures to significantly reduce deaths related to stressful occupations. It should also be obvious to every local government decision maker that physically fit officers are the best way to protect the public health and safety.

So why are many cities so reluctant to face the issue of physical ability requirements for police officers and firefighters? Many cities simply are not aware of the

need for fitness testing. However, there are at least three other significant reasons for this reluctance. Some city councils or governing boards feel that periodic medical examinations and/or physical ability training is too expensive. Officers with lengthy service records sometimes feel that physical ability programs are an effort to purge the department of the "old timers." And, some feel it is very difficult to develop and administer ability tests that are fair and that are job related.

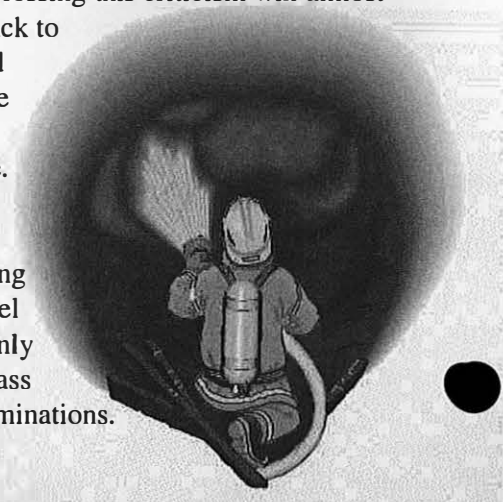
Cost for Employee Testing

Unfortunately, many local decision makers look only at the expense of physical ability testing. There's no doubt that testing all the police officer and firefighters in a city can become expensive. A police department with 20 officers may pay up to \$300 per medical examination for a total expenditure of \$6,000 annually. Physicals for an equal number of firefighters would bring the total annual expense for medical examinations to \$12,000. However, it is "penny wise and pound foolish" to dismiss this expense without considering the cost for not administering the examinations. The long-term costs associated with an unfit public safety workforce may include higher insurance premiums and worker's compensation costs, increased overtime pay, paying judgments in adverse court decisions, and perhaps the loss of valued employees to long-term disability or even death.

It's Not About Purging "Old Timers"

Officers with lengthy years of service often express the opinion that a physical ability program is nothing more than an effort to replace the "old timers" with younger officers. This criticism may be well founded in some cities. For example, if a local council member begins to compare fit and trim young officers to older officers who may be overweight and exhibit a sedentary lifestyle. Talk around city hall expressing this criticism will almost certainly make it back to those criticized, and then the policy issue is reduced to a "weeding out" issue.

It's not surprising that an officer nearing retirement would feel uneasy about suddenly being expected to pass annual medical examinations.



An additional requirement to pass physical fitness tests might seem even more threatening, especially if failure to pass the fitness test might result in dismissal.

Clearly, it is necessary to convince police and firefighters, who may have considerable political clout with certain council members, that medical examinations and physical fitness testing are not just a way to purge "old-timers." It is important to point out that physical fitness and training programs are in everyone's best interest and are intended to protect the health and safety of the public and the lives of the officers.

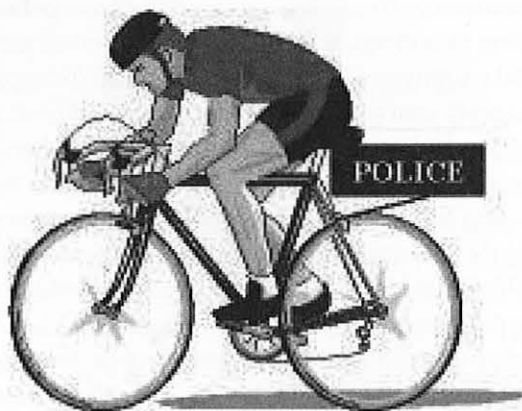
Implementing Fair Physical Ability Programs

In order to counter objections from police and firefighters most affected, physical ability programs must be administered as fairly as possible. Such programs should require the participation of all members of the department, not just older officers or those who are out of shape. Requirements should be tailored to the individual. For example, a police officer who is 50 years old cannot be expected to be in the same physical condition as a 30-year-old officer. The older officer needs to be fit enough to perform the essential functions of the job. Finally, a physical fitness program must allow sufficient time for compliance. In larger departments, officers might be transferred to desk jobs where they are not required to respond to emergencies while working up to basic physical ability requirements. In smaller departments, this might mean finding a temporary position for the officer in another city department.

Fitness Tests that are Fair and Job Related

Developing and implementing a successful physical ability testing program that is fair to everyone is an demanding process. In the summer 1999 issue of *Public Personnel Management*, Dan Biddle and Nikki Shepard Sill point out that it is in society's best interest to keep trained and experienced incumbents in public safety jobs. It is important to design testing programs with an appropriate level of difficulty. Physical testing standards that are too lax endanger public safety while those that are too strict may unduly penalize qualified individuals.

Setting standards too high could also subject the city to expensive and time-consuming litigation. Physical ability tests have undergone much scrutiny in the courts since the 1970's. Title VII of the Federal Civil Rights Act [42 U.S.C. Section 2000e-2(h)] states that it is not discriminatory employment practice when a "professionally developed ability test" is administered, as long as



that test does not have an adverse impact on a protected class. The act also prohibits the use of different cutoff scores or any other adjustments based upon race, color, religion, sex, or national origin.

Since passage of the Americans with Disabilities Act in 1990, medical screening decisions and recommendations must be based on an individual evaluation of the applicant and the actual tasks, physical demands, and working conditions under which the job is performed.

Numerous federal regulations have been promulgated to define what is an acceptable ability test. In the *Uniform Guidelines on Employee Selection Procedures*, 29 C.F.R. Part 1607, it states that if an ability test has a potential for an adverse impact on a protected class, then there must be proof of that test's validity. Physical ability tests must be "content" validated – that is, it must be demonstrated that the selection procedure is representative of important aspects of performance on the job for which the employees are to be evaluated.

According to Biddle and Sill, a recent survey of court-disputed police and fire physical ability tests showed a successful defense rate of less than 10 percent. This statistic shows that it is not advisable for a city government to set up arbitrary physical examination and fitness standards, draw a line in the sand, and insist that officers who fail the examination or do not meet the standards be fired. However, cities can develop criteria or standards for medical examinations and physical testing that are job related. If the testing is task related and these tasks are shown to be requirements of the job, the probability of successful defense in the event of a court challenge should be considerably improved.

Regular medical examinations should also be part of a physical fitness testing program. As with fitness testing,

medical examinations should include criteria related to job performance. Normally, a city will require police and firefighters to undergo a medical examination as part of the initial employment process. A successful job applicant is simply sent to a medical doctor for a physical examination and employment is contingent on the applicants passing that examination. However, a medical examination that does not consider the physical requirements of the job could be inadequate. A city official—police chief, fire chief, human resources department, city manager/administrator, or mayor—should develop a set of criteria by which medical doctors may determine if the applicant has the physical ability to perform the essential functions of the job.

Recommended Medical and Physical Fitness Test

Cities should develop medical and physical fitness testing programs to better serve the public safety needs of their citizens and protect the lives of police and firefighters. Participation should be mandatory for public safety officers where an elevated physical ability level is a necessity. Just as physical ability testing should be related to performing the job task, a medical examination should also be conducted in such a way that the examiner can express an opinion as to the employee's ability to perform the essential functions of the job. However, it is unacceptable to give an applicant or employee a failing score based simply on the existence of some physical condition or disability. The condition must be such that the applicant or employee cannot perform the essential job tasks. Testing should be developed in accordance with the following procedures.

1. For each job task, establish tests to determine an employee's ability to perform the task. These would include physical ability tests as well as medical examinations or vision and hearing tests.

2. Require annual medical examinations in addition to pre-employment medical examinations.

3. A medical examination must be conducted prior to any physical ability test. The city should request a release from liability from the employee who is taking



the physical ability test, in the event that the employee experiences health problems while taking the test.

4. The city should take full advantage of existing city recreation facilities, such as a community center, in developing and conducting the program.

5. The program should not establish physical requirements by sex or by age, as it is sometimes done. If the study reveals that a police officer must be able to drag a 150-pound dummy in order to do the job, both male and female officers of any age should be able to complete this task.

Tennessee Cities

An informal survey of 10 Tennessee cities recently found that there are more fire departments conducting physical ability testing than police departments. The survey shows that when testing is required, it is sometimes used as an employee recruitment tool and is not designed to attract and maintain physically fit officers.

One city surveyed has a detailed physical ability testing program. However, the program would probably have difficulty in defending a challenge because of potentially discriminatory procedures against age and gender. These are areas that cities should be cautious about when implementing a physical ability program.

Cities may opt to do nothing, have out-of-condition police officers and firefighters who represent a threat to public safety and endanger their own lives in the event of a very stressful emergency situation. Or, they can develop a program that is job related, not discriminatory, and ensures that the city has well-conditioned public safety officers.

The Germantown Fire Department has a physical ability testing program that meets the procedures recommended above by MTAS. It is a model program that would work in any Tennessee city. The following is an overview of their program, which is also available on video.

Editor's note:

The terms "physical ability" and "physical agility" are sometimes used interchangeably. This report uses the term physical ability to describe the level of physical fitness required of a police officer or firefighter. Physical agility refers to the ability to move quickly and easily.

Example of a Model Physical Ability Test

Germantown Police and Fire Departments

The Germantown Police and Fire Departments require a pre-employment medical examination. The fire department requires a pre-employment physical ability test. Employees must pass an annual physical ability test that is job specific to demonstrate the ability to perform tasks that are essential to the job. Every firefighter must demonstrate the physical ability to do the job. There is no differentiation for age or sex. Annual medical examinations are offered to firefighters through the city's health insurance program. Team members of the hazardous material training are required to take an annual medical examination. The fire department has a certified fitness coordinator and requires firefighters to "work out" at the Germantown Center, a city owned recreation facility.

The Germantown Fire Department Physical Ability Test, shown below, is considered a model physical ability test.

Overview

Taking the Physical Ability Test

This document contains important facts about the physical ability test for Germantown's Fire Department. Read it carefully to learn what the requirements are and what the test will be like. This test is a measure of your ability to do certain activities that are important to the job of a firefighter and emergency medical responder. This does not require you to be trained as a firefighter or emergency medical responder when you take the test.

Parts of the Test

There are nine training tasks in the test. Each task is described on the following pages. The test is conducted as a full event with candidates moving from one station to the next without a rest period between each station, to simulate emergency operations. An overall time for the completion of the test will be taken. (Note: Individual task times do not need to be taken.) Each station must be completed successfully before the candidate can proceed to the next station. A maximum time of 20 minutes will be permitted for the entire test.

What You Should Wear or Bring to the Test

Candidates should wear comfortable active working clothes. Sweat shirts, T-shirts, and rubber soled shoes, such as tennis shoes or work boots, are recommended apparel. Comfortable pants, such as jeans or sweat pants, should be worn. Tight clothes should be avoided. Gloves may be used during the physical ability testing. To wear during all stations, candidates will be given a turnout coat with a liner, a helmet, and a harness for a self-contained breathing apparatus (SCBA) containing an air bottle. Candidates will don this gear, weighing approximately 45 pounds. Prior to starting the test, no food, drink, or tobacco products will be allowed in the classroom or at the drill area at any time.

How to Prepare to Take the Physical Ability Test

The best way to prepare for the training tasks is to be in the best general physical condition possible. General physical conditioning exercises that will increase your endurance, stamina, and strength will be helpful. Some suggested exercises might include running, swimming, climbing stairs, sit-ups, push-ups, weight lifting, etc.

Testing

Candidates will report to the orientation station. An overview and walk through of the test site will be given, and any questions will be answered. Each candidate must sign a "Hold Harmless Agreement" before being permitted to participate in the physical ability test. Candidates will wait at the start until advised to begin by the test administrator. Prior to beginning of the test, gear will be issued to candidates and with instructions on how to put it on. Running will not be permitted on the drill field. Only fast walking will be allowed. Running is defined as moving so quickly that both feet are simultaneously off the ground. Candidates may not be assisted during this test, such as by persons handing them items or holding onto them (except in an emergency). The total test time will be taken at the end of each training task. Upon completing the test, candidates shall return to the orientation station until released by the test administrator.

Station #1: Weight Lift

Description: The candidate shall lift a 100-pound weight from the ground to a standing position between his/her waist and chest and hold for 30 seconds before returning it to the ground. Only the hands can be used to hold the weight, although the hands' positioning on the weight is at the candidate's discretion. The arms shall not be locked at the elbow in an upright position while holding the weight.

Station #2: Ladder Raise

Description: A 16-foot roof ladder, weighing approximately 35 pounds, will be positioned at a 90 degree angle (horizontal) to a building with the bottom of the ladder touching the building. Without dropping or losing control of the ladder, the candidate will raise the ladder from a horizontal position on the ground to a vertical position against the building by grasping consecutive rungs and walking forward. He or she must then return the ladder, in similar fashion, to its original position on the ground.

Station #3: Equipment Move

Description: On the signal of "Go," the candidate will lift, remove, and carry three fire department tools weighing between 25 and 75 pounds. The tools will be carried from a fire engine storage compartment to a designated target area indicated on the ground 10 feet away, and then return it to the fire engine compartment in a similar arrangement and close the compartment door.

Station #4: Hurst Tool Operation

Description: The candidate will lift a Hurst Tool (or Phoenix; commonly known as the 'Jaws of Life') spreader, weighing approximately 77 pounds, from the ground to waist height and fully open the spreaders and re-close them before returning the spreader to the ground. The candidate shall use arms and hands to hold and operate spreader without resting it upon body. The candidate must have full control over the unit and handle it steadily and smoothly. The spreader will be connected to the running Hurst (or Phoenix) power unit.

Station #5: Aerial Ladder Climb

Description: The candidate will climb, ensuring that at least one foot and one hand touches each rung of the ladder, to the top of the 50-foot telesquirt ladder fully extended at 60 degrees toward the rear of the telesquirt. Upon reaching the top, the candidate will touch the top rung (step) of the ladder and then descend the ladder to the ground floor. (Note: A quint ladder should be used with a person going to top of the second section.)

Station #6: Ventilation Event

Description: The candidate will lift a sledge hammer weighing nine pounds and position on a simulated (slanted) roof. The candidate will bring the hammer and his/her hands above his/her shoulder and in a chopping motion strike the mat in the target area. Both hands must be kept on the hammer and the hammer kept in full control. The candidate will repeat this procedure in a continuous motion without releasing the grip on the hammer as quickly as possible and without pausing to rest. In order to make a correct stroke, the candidate must bring the sledge hammer and his/her hands above his/her shoulder, bringing the hammer to a completely vertical position, prior to striking the mat in the target area. A total number of 35 correct strokes must be hit within the target area.

Station #7: Tower Event

Description: The candidate shall pick up a standpipe pack consisting of 100 feet of 1.5-inch hose strapped in folds of about five feet in length. The candidate will enter the hose tower carrying a standpipe pack consisting of 100 feet of 1.5-inch hose and climb up the spiral stairway as rapidly and safely as possible. The candidate will lay the standpipe pack on the ground at the third floor (second landing) and proceed up. Upon reaching the fourth (top) floor, the candidate will hoist a section of 2.5-inch hose with nozzle from the ground using a rope which has been tied off to the nozzle and placed through the window. A hose roller will be available to allow the candidate the option of pulling the rope or hoisting it. The candidate shall raise the hose to the point that the candidate can grasp the nozzle. The hose will then be smoothly returned to the ground. The candidate will then descend a 35-foot extension ladder that has been extended to and secured at the fourth floor window of the hose tower. The candidate must assure that at least one foot touches each step of the stairs and that at least one foot and one hand touches each rung of the ladder during ascending and descending. The event will be complete upon reaching the ground level. (Note: Candidates no longer have to return to the start point.)

Station #8: Victim Drag

Description: The candidate shall drag a 'victim' 100 feet without stopping or pausing to rest. The victim must weigh approximately 200 pounds.

Station #9: Hose Drag

Description: A 100-foot section of 1.5-inch hose charged with water, connected to a hydrant will be completely stretched out so that the nozzle is approximately 100 feet from the hydrant. The candidate will be required to pick up the hoseline at the nozzle and move it completely past the hydrant and extend it the full opposite direction, placing it approximately 100 feet on the other side of the hydrant, resulting in a total drag of approximately 200 feet.

GERMANTOWN FIRE DEPARTMENT
PHYSICAL ABILITY TEST
Candidate Score Sheet

CANDIDATE: _____

DATE: _____

START TIME: _____ FINISH TIME _____

TOTAL TIME: ____ Min. ____ Sec.

CANDIDATE OVERALL PASSES / FAILS (Circle)

COMMENTS:

Administrator _____

For further information about Germantown's program, contact John Selberg, assistant fire chief, at (901) 757-7279.